

CLAIMS

1. A method of supplying occupants of an aircraft with an oxygen-rich gas mixture by air separation in a pressure swing adsorption (PSA) system comprising, in one cycle, an adsorption/production phase and a desorption/regeneration phase, in which a high-performance adsorbent having a particle size not exceeding 0.8 mm is used, in which the duration of the cycle does not exceed 10 seconds and in which the feed air is introduced at a temperature between 50 and 90°C.
2. The method as claimed in claim 1, characterized in that the inlet temperature is between 60 and 80°C.
3. The method as claimed in claim 2, characterized in that the temperature is between 60 and 70°C.
4. The method as claimed in one of the preceding claims, characterized in that the particle size of the adsorbent does not exceed 0.6 mm on average.
5. The method as claimed in one of the preceding claims, characterized in that the duration of the cycle is between 6 and 9 seconds.
6. The method as claimed in one of the preceding claims, characterized in that the feed air is introduced at a pressure of less than 5 bar.
7. The method as claimed in claim 6, characterized in that the feed air is introduced at a flow rate of between 300 and 3600 Sl/min.
8. The method as claimed in one of the preceding claims, characterized in that the adsorbent is a zeolite X with a lithium content of greater than 85%.

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9. The method as claimed in claim 8, characterized in that the zeolite has an Si/Al ratio of between 1 and 1.25.